



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,156	04/25/2001	Shunpei Yamazaki	12732-033001	4159

26171 7590 01/29/2004
FISH & RICHARDSON P.C.
1425 K STREET, N.W.
11TH FLOOR
WASHINGTON, DC 20005-3500

EXAMINER

KIELIN, ERIK J

ART UNIT PAPER NUMBER

2813

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,156

Applicant(s)

YAMAZAKI ET AL.

Examiner

Erik Kielin

Art Unit

2813

MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-12, 14, 17, 19, 20 and 23-45 is/are pending in the application.
- 4a) Of the above claim(s) 23-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12, 14, 17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action responds to the Amendment filed 5 November 2003.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 17 recites the limitation "the substrate" in line 2. There is insufficient antecedent basis for this limitation in the claim. A "first substrate" and a "transparent substrate" are recited in independent claim 11 from which claim 17 depends, so it is unclear as to which substrate is being referred.

For the purposes of patentability, the claims will be interpreted as best understood.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 8-162269** in view of US 5,276,999 (**Bando**).

JP 8-162269 discloses forming a light emitting element **3, 4a-4e, 6** at the front surface of a substrate **2**; and bonding a color filter **1**, at the back surface of the substrate. (See Abstract and Figure.)

JP 8-162269 does not indicate if the backside of the substrate is chemically-mechanically polished.

Bando teaches chemical mechanical polishing of substrates (col. 5, lines 25-30), for the high flatness required of displays. (See col. 1, lines 6-12.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to polish the substrate, both front and back, of **JP 8-162269** because **Bando** teaches that high flatness is required for light-emitting displays, such as that in **JP 8-162269**.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,396,304 (**Salerno et al.**) in view of US 5,276,999 (**Bando**).

Regarding claims 9 and 10, **Salerno** discloses a method of manufacturing a light-emitting device comprising,

forming a semiconductor element **1203** and light emitting element **1204** electrically connected to the semiconductor element **1203**, both at the front surface of a substrate **1201** (col. 44, lines 17-30; Fig. 47); and

bonding a color filter **1212**, wherein the color filter at the back surface of the substrate **1201**. This configuration is shown in Fig. 46C with color filter element **1156** bonded to the back of substrate **1142** with the semiconductor elements (the transistor **1146** and pixel electrode **1148**) shown on the opposite side of **1142**. This configuration is also shown in Fig. 37. The color filter

Art Unit: 2813

plate **1006** is bonded to the back of the substrate **1008**. (See also col. 43, line 46 to col. 46, line 34. See also col. 2, lines 21-52; col. 2, line 66 to col. 3, line 5; col. 6, lines 22-42; col. 8, line 27 to col. 9, line 55.)

Regarding claims 9, 10, and 17, **Salerno** does not indicate if the backside of the substrate is chemically-mechanically polished.

Bando teaches chemical mechanical polishing of substrates (col. 5, lines 25-30), for the high flatness required of displays. (See col. 1, lines 6-12.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to polish the substrate, both front and back, of **Salerno** because **Bando** teaches that high flatness is required for light-emitting displays, such as that in **Salerno**.

7. Claims 11-12, 14 and 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,396,304 (**Salerno et al.**) in view of US 6,392,340 B2 (**Yoneda et al.**).

The prior art of **Salerno**, as explained above, discloses each of the claimed features except for indicating that the color filter is a transparent substrate with a colored layer thereon.

Yoneda discloses a method of manufacturing a light-emitting device comprising having a semiconductor element electrically connected to a light-emitting device (cover Fig.) and a color filter 22. **Yoneda** states at col. 2, lines 56-64,

“In the color display apparatus according to the present invention, a **color filter layer** or color conversion layer acting as a color element is **formed on a transparent substrate** and can be **bonded to an organic EL element**. Moreover, since the color element requires only one kind of color emitted from the organic EL element, it is not necessary to use plural kinds of luminous materials to the luminous element layers of the organic EL element, so that **the fabrication process can be simplified.**”
(Emphasis added.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to form the color filter of **Salerno** as a colored layer on a transparent substrate and then bond it to the EL substrate, to simplify the process of Salerno, as taught by **Yoneda**.

Regarding claims 13 and 18, **Salerno** discloses that there may be a polarization plate **1002** bonded ("secured") to the transparent color filter substrate **1006** (Fig. 37, col. 37, lines 8-19).

Regarding claims 14, 19, and 20, **Salerno** discloses that the substrate may be plastic which is a polymeric material (col. 9, lines 48-55).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Salerno** in view of **Yoneda** as applied to claims 9-12 above, and further in view of **Bando**.

The prior art of **Salerno** in view of **Yoneda**, as explained above, discloses each of the claimed features except for indicating if the backside of the substrate is chemically-mechanically polished.

Bando teaches chemical mechanical polishing of substrates (col. 5, lines 25-30), for the high flatness required of displays. (See col. 1, lines 6-12.)

It would have been obvious for one of ordinary skill in the art, at the time of the invention to polish the substrate, both front and back, of **Salerno** because **Bando** teaches that high flatness is required for light-emitting displays, such as that in **Salerno**.

Double Patenting

9. Applicant is advised that should claim 19 be found allowable, claim 20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In the instant case, **claim 20 is a verbatim duplicate of claim 19**. It is also noted that claim 20 is **not** an original claim, but is an amended claim because original claim 20 is drawn to chemical-mechanical polishing of the substrate.

Response to Arguments

10. Applicant's arguments filed 5 November 2003 have been fully considered but they are not persuasive.

In the paragraph bridging pages 5 and 6, Applicant argues that Bando does not teach polishing the backside but must teach polishing only the front side of the substrate. Examiner respectfully disagrees. First this is a conclusory observation by Applicant. MPEP 2145 states that "argument does not replace evidence where evidence is necessary." Inasmuch as Applicant has no proof for the allegation that only the front side is polished, the argument is not found persuasive. Moreover, one of ordinary skill would be especially motivated to polish both sides to give the optical flatness required of displays, as taught by Bando. One of ordinary skill would not ignore the requirement and leave one side unpolished when light would be scattered more from

Art Unit: 2813

an unpolished surface than a polished surface. This rebuttal applies for Bando as applied to the **JP 8-162269**, to **Salerno**, and to **Salerno** in view of **Yoneda**.

Beginning on p. 7, Applicant argues that **Salerno** does not teach bonding a polarization plate or anti-reflective film to the transparent substrate (the substrate having the colored layer). In support of this allegation Applicant argues that the polarization plate **1002** is part of a liquid crystal transmission display and not a light-emitting element. Examiner respectfully disagrees. The light-valves in **Salerno** are an integral part of the light-emitting device, which includes the light source **1000** and the light valves **1008**, (called the “active matrix circuit panel” in Salerno col. 37, lines 8-19), since the light valves **1008** prevent or allow the emission of light from the light source **1000**.

Additionally, if Applicant insists that the light emitting element must itself emit light then **Salerno** can be viewed in the following manner which **anticipates** at least claim 11.

Salerno discloses a method of manufacturing a light emitting device comprising, forming a **light emitting element 1000** at the front surface of a substrate **1004**; bonding a transparent substrate **1008** comprising at least a colored layer **1006**, at the back surface of the substrate **1004**; and bonding a polarization plate **1012** to the transparent substrate **1008**. As Applicant recognizes because the LCD is a transmission display the substrate **1008** is necessarily transparent or the light from the light source **1000** would not “transmit” through **1008** and the display would simply be black.

Finally, it is noted that the configurations in selected **Salerno** embodiments are not limiting and may be combined. Accordingly, the configuration of bonding a polarization plate to the light emitting device shown in Fig. 47 is considered disclosed in **Salerno**.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 703-306-5980. On or about 5 February 2004, this number will change to 571-272-1693. The examiner can normally be reached on 9:00 - 19:30 on Monday through Thursday.

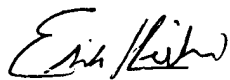
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached at 703-308-4940 (new telephone number will be 571-272-1702). The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Application/Control Number: 09/841,156

Page 9

Art Unit: 2813

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read "Erik Kielin".

Erik Kielin
Primary Examiner
January 24, 2004